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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,730	01/23/2004	Jesse Wainright	CWRU-P01-022	7333

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EXAMINER	
MAI, NGOCLAN THI	

ART UNIT	PAPER NUMBER
1742	

MAIL DATE	DELIVERY MODE
08/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/763,730	WAINRIGHT ET AL.	
	Examiner	Art Unit	
	Ngoclan T. Mai	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 May 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-7,9-16,18-20 and 22-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *23-25* is/are allowed.

6)☒ Claim(s) *1,4-7,9-16,18-20 and 22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 4-7, 9-16, 18-20, 22-25 are pending. Upon further consideration claims 1, 4-7, 9-16, 18-20, and 22 are rejected for the reasons as follows. for this reason the finality of that action is withdrawn.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 1, 4-7, 9-12, 14-16, 18, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanoya et al 2002/0033209 and (U.S. Patent No. 6,656,246) in view of Ikeda. Since the former is the publication of the latter, the following rejection is referenced by the latter.

Kanoya discloses hydrogen absorbing alloy powder comprising a metal matrix and added–component and formed by mechanical alloying the metal matrix particles and the added component particles (col. 1, lines 52-58.) The hydrogen absorbing alloy used includes Ti-Fe alloy and the added-component include transition metal of group VIII (col. 3, lines 14-34.) The amount of added-component is between 0.1 to 5.0% by atom (col. 5, lines 4-6.) Although the reference teaches the amount of the transition metal in atomic percentage, it is the examiner's position that, when converted to weight percent, this amount inherently encompasses the claimed amount absent evidence to the contrary. In the alternative, no patentable distinction is seen to exist between the reference and the claimed invention in the absence of any evidence showing the contrary.

The metal matrix particles have particle size D and the added-component particles have particle size d, wherein the relationship between d and D is $d \leq D/6$ (col. 1, lines 59-61.) Metal matrix having particle size D of about 5 microns and added-component with particle size d of smaller than 834 nm (0.834 micron) are used (col. 1, lines 62-67.) The hydrogen absorbing alloy powder taught therefore is made from and comprises hydrogen-absorbing alloy particles and added-component particles wherein the particle sizes of the hydrogen-absorbing alloy and the added-component are within the size range of the instant claims 2 and 16.

The differences between the claims and Kanoya are that Kanoya does not teach a binding agent at least partially covered the mechanically alloyed storage material particles and solvent.

Ikeda teaches a method for forming electrode for alkali batteries comprising adding solvent and binder agent to the hydrogen storage material to form a slurry and applying the slurry to an electrically conductive core body to form a coating; the coated body is then dried to removed the solvent (Ikeda's abstract.) Ikeda teaches employing PEO as binder in an amount of 1% by mass with respect to the mass of the hydrogen-absorbing alloy, water as a solvent for PEO binder (col. 4, lines 20-27.) Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the method of Ikeda to make the mechanically alloyed storage material into electrode. It would also be obvious to one skilled in the art to employ the amount and type of binder as well as the type of solvent used by Ikeda to form the electrode of Kanoya.

As for claims 4-7 and 22, Kanoya teaches the types of hydrogen absorbing or storage alloys. See col. 5, lines 7-34.

As for claim 14-15 Kanoya is silent about hydrogen storage alloy material retains its hydrogen sorption/desorption effectiveness after exposure to ambient air and water or to an aqueous solution of potassium hydroxide. However since the hydrogen storage alloy material of Kanoya is formed by the same materials and produced by the same method, i.e., mechanical alloying, the properties as recited in the instant claims would have inherently possessed by the teachings of the cited references. Therefore, the burden is on the applicant to prove that the product of the prior art does not necessarily or inherently possess characteristics attributed to the claimed product. *In re Spade*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990), *In re Best*, 195 USPQ 430 and MPEP § 2112.01.

Claims 13 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanoya in view of Ikeda as applied to claim 11 above, and further in view of Hampden-Smith et al. (2002/0168570).

Kanoya in view of Ikeda differ from instant claim in that none of the references teaches solvent having low viscosity suitable for screen-printing and ink-jet printing application.

In making battery electrode it is known to applying battery powders to a substrate through the use of a thick-film paste, see Hampden-Smith [0181]. In the thick film process, a viscous paste that includes a functional particulate phase (e.g. a fine battery powder) is screen printed onto a substrate, [0183]. Ink-jet printing is another method for depositing the powders in a predetermined pattern. The powder is dispersed in a liquid medium and dispensed onto a substrate using an ink jet printing head that is computer controlled to produce a pattern, [0193]. Therefore it would have been obvious to one of skill

in the art to employ well-known techniques as disclosed by Hampden-Smith to form electrode of Kanoya in view of Ikeda.

4. Claims 23-25 are allowable.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoclan T. Mai whose telephone number is (571) 272-1246. The examiner can normally be reached on 9:30-6:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ROY KING
SUPERVISORY PATENT EXAMINER
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n.m.